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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/583,251

05/31/2000

Hirofumi Takei

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12/14/2004

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EXAMINER

LONG, HEATHER R

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/583,251

Applicant(s)

TAKEI, HIROFUMI

Examiner

Heather R Long

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,8,11-13,15,18-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 2,3,7,9,10,14,16,17 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2000 and 03 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/9/2004 have been fully considered but they are not persuasive.

Referring to the Takei reference, the Applicant argues that the values $R(Y_{max})$ and $B(Y_{max})$ are not determined from a predetermined region (the predetermined region being the same as the predetermined region used for calculating the average value) of an image frame but only for regions that in which calculation shows white value extraction has occurred. The Examiner agrees that the $R(Y_{max})$ and the $B(Y_{max})$ are determined for blocks that are in the white extraction range according to their average values. However, the Examiner respectfully disagrees that the $R(Y_{max})$ and $B(Y_{max})$ are not determined from a predetermined region that is the same as the predetermined region as used for the average calculations. The Examiner is interpreting the predetermined region to be the whole image sensing area (all 64 blocks as can be seen in Fig. 8 of the Takei reference) when determining the average values. Furthermore, Takei uses the blocks from the predetermined region that were considered to be in the white extracting area when determining the peak values. Therefore, the predetermined region for the average calculations inherently includes the predetermined region for the peak calculations. The Examiner understands that the Applicant's invention

uses all 64 blocks to determine both the peak and average calculations, however this limitation is not recited in the Applicant's claims.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1, 4, 6, 8, 11, 13, 15, 18, 20, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Takei (U.S. Patent 5,831,672).

Regarding claim 1, Takei discloses a white balance correcting device for correcting white balance of a picked-up image signals, comprising: an image pickup device (1) which picks-up image signals; peak value acquiring part which acquires a peak value of brightness and color signal values corresponding to the peak value of brightness obtained in a predetermined region of the image signals by the image pickup device; average value calculating part which calculates an average value of brightness and average values of color signal values obtained in a predetermined region of the image signals by the image pick-up device; comparison part which makes comparison between brightness information of the average value and the peak value; selection part which selects either of the values obtained by the average value calculating part or the values obtained by the peak value acquiring part according to comparison result by the comparison part; and white balance control part which controls white balance on the basis of the values selected by the selection

part (col. 10, lines 1-11 and 32-41; col. 14, lines 58-61; col. 15, lines 27-30 and 50-64): Takei discloses in col. 15, lines 50-56 that "the correction signal calculation section (34) selects data having the minimum value, i.e., data which minimizes the white balance correction amount, of color temperature data [Ravr(w), Bavr(w)], [R(Ymax), B(Ymax)], and [Ravr, Bavr], and compares the selected color temperature data with the above-mentioned reference potentials (reference values) Rref and Bref". Furthermore, it is inherent that a comparison would have to be made between [Ravr(w), Bavr(w)], [R(Ymax), B(Ymax)], and [Ravr, Bavr] in order to select the data with the minimum value. Furthermore the predetermined region for the average calculations inherently includes the predetermined region for the peak calculations since Takei uses the whole image sensor as the predetermined region for the average calculations and then uses the blocks from the predetermined region that were considered to be in the white extracting area when determining the peak values.

Regarding claim 4, Takei discloses in Fig. 9 a white balance correcting device wherein the peak value acquiring part acquires peak values of video signals from signals that have beforehand been subjected to limitation for setting an upper limit to a signal level of an inputted video signal (col. 10, lines 25-30).

Regarding claim 6, Takei discloses a white balance correcting device for correcting white balance of a picked-up image, comprising:

mean value calculating part which calculates a mean value of inputted video signals; peak value acquiring part which acquires a peak value of the inputted video signals; comparison part which makes comparisons between brightness information of the mean value and the peak value; selection part which selects either of mean color values obtained by the mean value calculating part or peak color values obtained by the peak value acquiring part according to the comparison result by the comparison part; and white balance control part which controls white balance on the basis of the value selected by the selection part (col. 10, lines 1-11 and 32-41; col. 14, lines 58-61; col. 15, lines 27-30 and 50-64). See explanation for claim 1 and response to arguments for further discussions.

Regarding claims **8** and **11**, these are method claims corresponding to the apparatus claims 1 and 4 respectively. Therefore, claims 8 and 11 are analyzed and rejected as previously discussed with respect to claims 1 and 4.

Regarding claim **13**, this is a method claim corresponding to the apparatus claim 6 respectively. Therefore, claim 13 is analyzed and rejected as previously discussed with respect to claim 6.

Regarding claim **15**, Takei discloses a storage medium which stores therein a program for executing a process for correcting white balance of a picked-up image signals, the process comprising: picking-up image signals; acquiring a peak value of brightness and color signal values corresponding to the peak value from the image signals obtained in

a predetermined region of the image signals picked-up in the picking-up step; calculating an average value of brightness and average values of color signals from the image signals obtained in a predetermined region of the image signals picked-up in the picking-up step; making comparison between brightness information of the average value and the peak value; selecting either of the values of obtained in the average value calculating step or the values obtained in the peak value acquiring step according to the comparison result; and controlling white balance on a basis of the values selected in the selection step (col. 9, lines 49-54; col. 10, lines 1-11 and 32-41; col. 14, lines 58-61; col. 15, lines 27-30 and 50-64). See explanation for claim 1 and response to arguments for further discussions.

Regarding claim **18**, Takei discloses a storage medium wherein peak values of the image signals are acquired in the peak value acquiring step from signals that have beforehand been subjected to limitation for setting an upper limit to a signal level of the image signals picked-up in the image picking-up step (col. 10, lines 25-30).

Regarding claim **20**, Takei discloses a storage medium which stores therein a program for executing a process for correcting white balance of a picked-up image signals, the process comprising: inputting part (1) which inputs picked-up image signal; peak value acquiring part which acquires a peak value of brightness and color signal values corresponding to the peak value of brightness obtained in a predetermined region of the image signals inputted by the inputting part; average value

calculating part which calculates an average value of brightness and average values of color signal values obtained in a predetermined region of the image signals inputted by the inputting part; comparison part which makes a comparison between brightness information of the average value and the peak value; selection part which selects either of the values obtained by the average value calculating part or the values obtained by the peak value acquiring part according to the comparison result by the comparison part; and white balance control part which controls white balance on the basis of the values selected by the selection part (col. 10, lines 1-11 and 32-41; col. 14, lines 58-61; col. 15, lines 27-30 and 50-64). See explanation for claim 1 and response to arguments for further discussions.

Regarding claim **22**, Takei discloses a white balance correcting device for correcting white balance of a picked-up image, comprising: picking-up image signals of an image pick-up plane; dividing part which divides the image pickup plane into a plurality of blocks; average value calculating part which calculates average values of image signals obtained in each of a plurality of blocks of the image signals picked up in the picking-up step; peak value acquiring part which acquires peak values of the image signals from all of the plurality of blocks of the image signals picked-up in the picking-up step independently of the peak value acquiring part; selection part which selects either of the values obtained by the average value calculating part or the values by the peak value acquiring

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part; and white balance control part which controls white balance on the basis of the value selected by the selection part (col. 10, lines 1-11 and 32-41; col. 14, lines 58-61; col. 15, lines 27-30 and 50-64). See explanation for claim 1 and response to arguments for further discussions.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 5, 12, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takei (U.S. Patent 5,831,672).

Regarding claim **5**, Takei differs from claim 5 in that claim 5 further requires a white balance correcting device wherein the peak value acquiring part acquires peak values of video signals from signals that have beforehand been subjected by a low-pass filter to limitation for setting an upper limit to a signal level of an inputted video signal. However, Official Notice is taken that both the concept and the advantages of using a low-pass filter to set the upper limit of a signal level of an inputted video signal is well known and expected in the art. Therefore, it would have been obvious to use a low-pass filter to set the upper limits of a signal level of an inputted video signal to obtain a certain range of peak values.

Regarding claim **12**, this is a method claim corresponding to the apparatus claim 5 respectively. Therefore, claim 12 is analyzed and rejected as previously discussed with respect to claim 5.

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Regarding claim **19**, grounds for rejecting claim 5 apply for claim 19 in its entirety.

Allowable Subject Matter

6. Claims 2-3, 7, 9-10, 14, 16-17, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: prior art fails to teach or suggest a white balance correcting device:

a. Wherein the comparison part computes a comparison between a first integral value obtained by integrating average values obtained by the average value calculating part and a second integral value obtained by integrating peak values obtained in the predetermined region by the peak value acquiring part, and, wherein the selection part selects the values obtained by the peak value acquiring part if the second integral value is not less than a predetermined number of times the first integral value, and the selection part selects the value obtained by the average value calculating part, if the second integral value is less than the predetermined number of times the first value.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather R Long whose telephone number is 703-305-0681. The examiner can normally be reached on Mon - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Heather R Long
Examiner
Art Unit 2615

HRL
December 9, 2004


TUAN HO
PRIMARY EXAMINER